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PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION

Improvements relating to Torpedo and Bomb Screens for Ships

I, JOSEPH JOHN ATTERBURY, 178, King's Road West, Swanage, Dorset, (English), do hereby declare the nature of this invention to be as follows:—

5 The apparatus is constructed, for the protection of vessels at sea, against the attacks by submarines torpedoes or bombs from aircraft.

10 The apparatus consists of suitably constructed wire netting, weighted at the base and operated by a spring attachment contained in a metal tube, which is slotted for the free running of a steel bar with a ball end resting upon the spring.

15 The tube end is covered with a strong screwed cap, sufficient to resist the return of spring after freeing any torpedo which may have been caught.

20 The whole apparatus is hinged at the vessel end of the tube; to enable the fall and rise, by cable wire running through

guide wheels, to be operated by the capstan of vessel or similar means, for the whole side of vessel, the apparatus can be arranged to throw out from the side of 25 vessel, instead of the fall and rise position.

Bombs from the air are caught, and thrown into the water, by the formation of the netting in a triangular shape, the 30 apex of the triangle being several feet higher than those of the sides, the resistance of centre spring being two, against one, at the outside position, a steel bar is not used for the connecting links, of the 35 apparatus, double sprung wire instead, (to lessen resistance) attached to a cast steel hook and cylinder running in the tube, "six inches in length".

Dated the 30th day of June, 1938.
J. J. ATTERBURY.

COMPLETE SPECIFICATION

Improvements relating to Torpedo and Bomb Screens for Ships and Land Structures

40 I, JOSEPH JOHN ATTERBURY, a British subject, of 178, King's Road West, Swanage, Dorset, do hereby declare the nature of this invention and in what manner the same is to be performed, to 45 be particularly described and ascertained in and by the following statement:—

This invention relates to torpedo and bomb screens for ships, and land structures.

50 The invention has particular reference to screens which are supported from the hull of a ship on land structure by means of arms which are adapted to position the screens at a distance from the hull of the 55 ship or from the land structure to receive the impact of a torpedo or bomb.

A screen of this kind already proposed consisted of a wire net supported from the front ends of two rods each carried by a 60 piston slidable in a tubular arm, so to extend from the end of the arm along the axial line thereof, each piston bearing on the outer end of a coiled spring whose inner end engaged a fixed stop in the 65 cylinder or arm, so that, on impact of a

torpedo, the net and rods moved inwardly against the action of the springs.

Also there has been provided for a ship a torpedo screen consisting of a pair of spaced-apart slotted tubular arms, a flat 70 sided block slidably mounted in each arm and projecting through the slot therein so as to be slidable along the slot, springs contained within the arm and acting on the respective ends of the block and a 75 shield or caisson suspended from and between the projecting portions of the blocks.

According to the present invention, there is provided a torpedo and bomb 80 screen applicable also for land structures comprising a screen supported by a pair of slotted tubular arms through the medium of a rod to which the screen is attached, said rod being dis- 85 placeable along the slots and provided at its ends with spherical heads mounted in the respective arms so as to be capable of angular movement with respect to said arms each arm containing a spring which 90 normally maintains the adjacent end of

the rod in contact with an end cap fitted on to the extremity of the arm.

The invention is illustrated by the accompanying sheet of drawings, wherein:—

Figure 1 is a sectional plan view of a net-carrying arm, and

Figure 2 is a side elevational view of the said arm.

10 In carrying out the invention, and referring to the drawings, there is provided a net-carrying arm constituted by a tube 1 having a solid inner end portion 2 terminating in an eyed lug which is 15 pivotal on a bolt 4 passed through the jaws of a member 5 having a centrally disposed screwthreaded stem 6 which extends through a plate 7 and a flexible pad 8 and the hull 9 of a ship, and is 20 locked to the hull by means of lock nuts 10.

The tube 1 is provided in its wall with a longitudinally disposed slot 11 which 25 tube to the outer end thereof, and in said tube 1 is slidable the spherical head 12 of a horizontal rod 13 which extends through the slot 11, and from said rod 13 is suspended the weighted wire net 14.

30 The spherical head 12 aforesaid engages against a metal pad 15, and interposed between said pad 15 and the solid end portion 2 of the tube, and bearing against said pad and said end portion, is a compression spring 16.

The outer end of the tube 1 is adapted to be closed by means of a screw-cap 17, a flexible pad 18 being interposed between 40 said cap 17 and the outer end of the tube 1 aforesaid.

The tube 1 is adapted to be lowered by means of a wire cable 19 working through

a pulley block 20 and affixed to a lug 21 on the upper side of the tube 1.

A plurality, as will be readily understood, of these net-carrying arms are disposed on the hull of the ship from end to end thereof, and are held in spaced relation to one another by means of a wire cable 22 secured to the lug 21 of each 50 tube, said wire cable 22 extending through the whole system and its ends fixedly secured to the ship.

In an arrangement applicable for use as a protection from bombs on land, the 55 arms 1 will upstand in spaced relation, the net 14 being suspended from and between the rods 13 so as to serve as a bomb-catcher.

Having now particularly described and 60 ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A torpedo and bomb screen applicable 65 cable also for land structures comprising a screen supported by a pair of slotted tubular arms through the medium of a rod to which the screen is attached, said rod being displaceable along the slots and 70 provided at its ends with spherical heads mounted in the respective arms so as to be capable of angular movement with respect to said arms, each arm containing a spring which normally maintains the 75 adjacent end of the rod in contact with an end cap fitted on to the extremity of the arm.

2. Torpedo and bomb screens for ships substantially as described herein with 80 reference to the accompanying sheet of drawings.

Dated this 28th day of November, 1938.

J. J. ATTERBURY.

[This Drawing is a reproduction of the Original on a reduced scale.]

